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FIRST NAMED INVENTOR

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CONFIRMATION NO.

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EXAMINER

HOM, SHICK C

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,680

Applicant(s)

CHANG ET AL.

Examiner

Shick C. Horn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003 and 22 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 6-11, 14-21, 25 and 26 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 4, 5, 12, 13 and 22-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. Claims 8 and 19-21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8 line 1 which recite "the cross points" lacks clear antecedent basis because no cross points have been previously recited in the claims and therefore the limitation is not clearly understood. Likewise in claims 19-21 lines 1-2 which recite "the subblocks" lack clear antecedent basis.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not

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identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-7, 10-11, 13, 15, and 24-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,697,368. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

For claims 1-7, 10-11, 13, 15, and 24-25, the claims 1-4 of U.S. Patent No. 6,697,368 disclose a digital switch comprising: a switching fabric; and a plurality of blades coupled to said switching fabric via serial pipes; wherein each blade outputs

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serial data streams with in-band control information in multiple stripes to said switching fabric, wherein said switching fabric includes a plurality of cross points corresponding to the multiple stripes, wherein said multiple stripes comprise five stripes, and said serial data streams with in-band control information comprises five serial data streams of wide striped cells carrying packets of data, the wide striped cells including the in-band control information, wherein said plurality of cross points comprises five cross points, and each blade has five serial links coupled to respective ones of said five cross points (see claim 1);

wherein the switching fabric determines a destination blade for data in the data streams using the in-band control information (see claim 2);

wherein the wide striped cells include start-of-cell in-band control information in each of the five stripes (see claim 3);

wherein the serial data streams output by each blade represent an aggregation of input serial data streams provided through physical ports to a respective blade (see claim 4).

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The application's claims 1-7, 10-11, 13, 15, and 24-25 merely broaden the scope of the U.S. Patent No. 6,697,368 claims 1-4 by eliminating wherein said plurality of cross points comprises five cross points, and each blade has five serial links coupled to respective ones of said five cross points as in claims 1, 10 and 15; however this limitation is now recited in claim 13; and reciting the limitations wherein said switching fabric includes a plurality of cross points corresponding to the multiple stripes in claim 2, and wherein said multiple stripes comprise five stripes, and said serial data streams with in-band control information comprises five serial data streams of wide striped cells carrying packets of data, the wide striped cells including the in-band control information in claims 4, 24. The limitations of application's claims 3, 5, 6, 7, 11, 25 corresponds to claims 4, 3, 2, 4, 4, and 2, respectively. It has been held that the omission of a element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ (CCPA). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-3, 6-11, 14-21, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bianchini Jr. (6,842,422) in view of Berenbaum et al. (6,272,144).

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Regarding claims 1-3, 6-11, 14-21, and 25-26:

Bianchini Jr. disclose a digital switch comprising: a switching fabric; including data streams with control information in multiple stripes to the switching fabric, and wherein the switching fabric uses the control information to control traffic flow of data in the multiple stripes through the switching fabric (see col. 2 lines 17-33 which recite the switching system comprising switch fabrics connected to interfaces for receiving stripes of data streams and col. 1 lines 6-14 which recite the switching system using the stripes of data from a data stream to switch the data stream) as in claims 1, 10, 15.

Regarding claims 2, 8, 16:

Bianchini Jr. disclose wherein the switching fabric includes a plurality of cross points corresponding to the multiple stripes (see Figs. 4-5 the switching fabrics 1-3 and col. 4 lines 12-24 which recite data striping being extended to network switch by striping across multiple fabrics constructed from central TDM resource in a switch).

Regarding claims 3, 7, 9, 11, 14:

Bianchini Jr. disclose wherein each cross point includes a plurality of port slices coupled to the plurality of blades (see col. 1 lines 17-43 which recite each switch fabric having input

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ports that receive packets and output ports that transmit packets).

For claims 1, 6, 9-10, 15, 17-21, 25-26, Bianchini, Jr. discloses all the subject matter of the claimed invention with the exception of the plurality of blades coupled to the switching fabric via serial pipes; wherein each blade outputs serial data streams with the same in-band control information in multiple stripes to the switching fabric.

Berenbaum et al. from the same or similar fields of endeavor teach that it is known to provide the plurality of blades coupled to the switching fabric via serial pipes; wherein each blade outputs serial data streams with the same in-band control information in multiple stripes to the switching fabric (see col. 4 lines 35-49 which recite multiple line cards connected to the switch fabric for in-band transfer of control information used to configure the transmission and col. 4 line 65 to col. 5 line 44 which recite the control information being a series of commands). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the plurality of blades coupled to the switching fabric via serial pipes; wherein each blade outputs serial data streams with the same in-band control information in multiple stripes to the switching fabric as

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taught by Berenbaum et al. in the digital switch of Bianchini, Jr.

The plurality of blades coupled to the switching fabric via serial pipes; wherein each blade outputs serial data streams with the same in-band control information in multiple stripes to the switching fabric can be implemented by connecting the blades or circuit cards using the serial pipes or links for transferring in-band control information of Berenbaum et al. to the switching fabric of Bianchini, Jr. The motivation for using the plurality of blades coupled to the switching fabric via serial pipes; wherein each blade outputs serial data streams with in-band control information in multiple stripes to the switching fabric as taught by Berenbaum et al. in the digital switch of Bianchini, Jr. being that it provides more efficiency for the digital switch since by using in-band control information to control traffic flow through the switching fabric the switch does not need to provide separate line card control interface.

Allowable Subject Matter

8. Claims 4-5, 12-13, and 22-24 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Manning et al. disclose a switch fabric controller comparator system and method.

Kouloheris et al. disclose a disk access method for delivering multimedia and video information on demand over wide area networks.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Monday to Friday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH



DANG TON
PRIMARY EXAMINER